

**Govt. of Karnataka, Department of Technical Education**  
**Diploma in Computer Science & Engineering**  
**Fourth Semester**  
**Subject : DBMS lab**

**Contact Hrs / week : 6**

**Total hrs: 96**

Note: Draw E-R diagrams & Relational schema.

1. Create the following tables for a COMPANY database

**EMPLOYEE**

Fname	Minit	Lname	<u>Ssn</u>	Bdate	Address	Sex	Salary	Super_ssn	Dno
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**DEPARTMENT**

Dname	<u>Dnumber</u>	Mgr_ssn	Mgr_start_date
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**DEPT\_LOCATIONS**

<u>Dnumber</u>	<u>Dlocation</u>
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**PROJECT**

Pname	<u>Pnumber</u>	Plocation	Dnum
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**WORKS\_ON**

<u>Essn</u>	<u>Pno</u>	Hours
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**DEPENDENT**

<u>Essn</u>	<u>Dependent_name</u>	Sex	Bdate	Relationship
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For table structure refer page no: 247 and for sample values refer page no. 159 of the reference text 1.

2	Illustrate the use of constraints
	NOT NULL
	PRIMARY KEY
	UNIQUE
	CHECK
	DEFAULT
	REFERENCES
3	DATA MANIPULATION : INSERTING VALUES INTO A TABLE
4	Illustrate the use of SELECT statement
5	Conditional retrieval - WHERE clause

6	Query sorted - ORDER BY clause
7	Grouping the result of query - GROUP BY clause and HAVING clause
8	Aggregate functions in SQL (Count, Sum, Max, Min, Avg)
9	SQL operators
10	Query multiple tables using JOIN operation
11	Write nested and complex queries using multiple tables
12	Use different single row and multi row (group) functions
13	Perform UPDATE, ALTER, DELETE, DROP operations on tables
14	Illustrate the use of CREATE VIEW command and manipulating
15	Database Security And Privileges : Use GRANT and REVOKE commands
16	Use COMMIT and ROLL BACK commands
17	Use SAVEPOINT commands
18	Using any front end tool develop an application involving minimum 3-4 tables. (Not for exam)

### Scheme of examination

1	Record	05
2	Create tables (min 2 tables )	10
3	Inserting records	05
4	Writing 5 queries on minimum two tables	30
5	Execution with results for 5 queries	30
6	Viva – Voce	20
	<b>Total marks</b>	<b>100</b>

#### References:

1. **Fundamentals of Database Systems**, 5<sup>th</sup> edition, Ramez Elmasri, Shamkan B. Navathe, Pearson EducationSql Pl/Sql The Programming Language Of Oracle W/CD, Ivan Bayross, Bpb Publications, 2009.
2. <http://www.sql-tutorial.net/>
3. Mysql 5 For Professionals W/Cd, Ivan Bayross / Sharanam Shah, Shroff Publishers & Distributors
4. Database Management System Oracle SQL and PL/SQL, Pranab Kumar das Gupta, PHI, 2009 Print

Softwares:

Database : SQL/MySQL/Oracle

Front end tool for database querying: Sqldeveloper or any other query tool

[www.oracle.com](http://www.oracle.com)

[www.mysql.com](http://www.mysql.com)